

CLAIMS

1. Probe for measuring a magnetic field comprising at least one magnetoresistive or magnetoinductive sensor (102, 104, 106) which is sensitive to the magnetic field along a predetermined selected measurement axis, characterised in that it comprises at least two magnetoresistive or magnetoinductive sensors (102, 104, 106) which are rigidly connected to each other in a position such that their selected measurement axes are angularly offset, and in that the probe comprises output terminals which are specific to each magnetoresistive or magnetoinductive sensor (102, 104, 106) in order to provide a signal which is representative of the magnetic field measured by each sensor along the selected measurement axis thereof.

2. Measurement probe according to claim 1, characterised in that it comprises at least two magnetoresistive or magnetoinductive sensors (102, 104) which are formed in the same semi-conductor substrate, the two sensors having selected detection axes which are arranged perpendicularly relative to each other.

3. Measurement probe according to claim 1 or 2, characterised in that it comprises at least three magnetoresistive or magnetoinductive sensors (102, 104, 106) whose selected measurement axes are perpendicular in pairs.

4. Measurement probe according to any one of the preceding claims, characterised in that it comprises at least two pairs of magnetoresistive or magnetoinductive sensors (802, 804, 806, 808), the sensors of each same pair having their selected axes parallel and offset relative to each other in a

transverse direction relative to their selected measurement axes and the selected measurement axes of the sensors of two separate pairs are angularly offset.

5. Measurement probe according to claim 4, characterised in that it comprises at least nine magnetoresistive or magnetoinductive sensors (1002A, 1002B, 1002C, 1004A, 1004B, 1004C, 1006A, 1006B, 1006C) which are distributed in three triplets of three sensors, the three sensors of the same triplet having their selected measurement axes parallel and offset relative to each other in transverse directions relative to their selected measurement axes and the selected measurement axes of the sensors of separate triplets are angularly offset.

6. Measurement probe according to any one of the preceding claims, characterised in that all the magnetoresistive or magnetoinductive sensors (1206, 1208) of the probe are distributed in accordance with two layers (1202, 1204).

7. Measurement probe according to claim 6, characterised in that the selected measurement axes of the sensors of different layers (1202, 1204) are angularly offset.

8. Measurement probe according to claim 6 or 7, characterised in that the sensors of the same layer (1202, 1204) have their selected measurement axes parallel.

9. Measurement probe according to any one of claims 1 to 5, characterised in that all the magnetoresistive or magnetoinductive sensors (1304, 1308) of the probe are distributed on the same layer (1302).

10. Device for measuring a magnetic field comprising at least one probe (100) according to any one of the preceding claims, and a processing chain (28) which is specific to each magnetoresistive sensor and means (18) for processing the signals from the various processing chains.